Magnitude of Findings

Theme	Number of Objectives
Demonstrate Deep Space Capabilities	13
Scientific Research	8
Planetary Defense	4
Other	5

- A lot of overlapping objectives and activities.

Deep Space Capabilities Theme: Key Observations

- Objectives
  - Operations
    - Autonomous Operations, Degraded Communications, In-flight training, Human Robotic Ops
  - Human Research
    - Physiological, Radiation, Psychological, Partial Gravity
  - Hardware Systems
    - Long duration system, close-loop ECLSS, Reliability and Maintainability, Functional Redundancy
- Activities
  - Practice NEO Operations, Long Duration Flight, Sample Handling and Curation, Radiation Mitigation
  - Testing of Hardware Systems (High ISP, Propulsion, Deep Space Comm, ISRU)
  - Practice NEO-related anchoring, sampling and techniques
- Target Characteristics
  - Heterogenious, medium to large, not rapidly rotating, high water content

Scientific Research Theme: Key Observations

- Objectives
  - Characterize physical parameters, composition and resources
- Activities
  - Subsurface (Drilling, Core Sampling)
    - Seismic
  - Surface Sampling, Bulk Sampling
  - Deploy Scientific Instruments for On-going Operations
- Target Characteristics
  - All

Planetary Defense Theme: Key Observations

- ## Objectives
  - Identify and characterize threats (composition, size, porosity, etc)
  - Mitigate threats
- ## Activities
  - Demonstrate mitigation techniques
  - Validate tracking capabilities
  - Identify all threats
  - Ground sensing data
  - Better understanding of human operations with NEOs
- ## Target Characteristics
  - Small ones (to practice)
  - PHOs (greater than 30 meters)